

WHAT IS CLAIMED IS:

1. An apparatus for protecting a passenger seated in a seat having a seat cushion and a seat back comprising a belt connected to the seat cushion and the seat back and configured to inflate to form a sleeve wall at the side of the seat cushion; and wherein when the air belt is configured to decrease length when inflated.
2. The apparatus of claim 1, furthering comprising a plate disposed under a seating surface of the seat cushion and configured to tilt upward.
3. The apparatus of claim 2, wherein the air belt is connected to the plate and the seat back.
4. The apparatus of claim 3, wherein the plate is operatively connected with at least one of a seat belt buckle and a seat belt lap anchor so that when the plate tilts upward the at least one of the buckle and the lap anchor move downward.
5. The apparatus of claim 4, wherein the connecting between the plate and the at least one of the buckle and the anchor is a wire.
6. The apparatus of claim 5, wherein movement of the wire is limited to one direction.
7. The apparatus of claim 1, wherein the air belt is connected to a plate located under a seating surface of the seat so that when the air belt inflates and decreases in length the plate tilts upward to inhibit the passenger from being subjected to the submarine phenomenon.
8. An apparatus for protecting a passenger seated in a vehicle seat having a seat cushion and a seat back comprising a belt connected to the seat cushion and the seat back and configured to inflate to form a sleeve wall at the side of the seat cushion; and wherein when the air belt is configured to decrease length when inflated; wherein the air belt is configured to inflate when the vehicle is detected to be involved in a side crash.

9. The apparatus of claim 8, further comprising a seat belt that is configured to be pretensioned when the air belt is inflated.
10. The apparatus of claim 9, further comprising a belt buckle configured to move downward when the air belt is inflated to thereby apply a pretension to the seat belt.
11. The apparatus of claim 9, further comprising a lap anchor configured to move downward when the air belt is inflated to thereby apply a pretension to the seat belt.
12. The apparatus of claim 10, wherein movement of the belt buckle is limited to the downward direction.
13. The apparatus of claim 11, wherein movement of the lap anchor is limited to the downward direction.
14. The apparatus of claim 8, further comprising an upwardly tilting plate located under a seating surface of the cushion, wherein the plate is configured to tilt upwards when the air belt inflates.